

WHAT IS CLAIMED IS:

1. A friction hinge assembly for an imaging mirror of a display unit, comprising:

5 a mounting base coupled to a housing of the display unit, the mounting base comprising a longitudinal pin portion;

a hinge member coupled to the imaging mirror, the hinge member positioned substantially around the pin portion, the hinge member comprising a support portion;

10 wherein the pin portion is configured to apply a friction caused by contact of the pin portion with the support portion of the hinge member;

15 wherein the hinge member is configured to rotate about the pin portion from a first position to a second position without the friction; and

wherein the hinge member is configured to rotate about the pin portion from the second position to a third position with the friction.

20 2. The friction hinge assembly of Claim 1, wherein the pin portion comprises at least one corner configured to contact the support portion of the hinge member to apply the friction.

25 3. The friction hinge assembly of Claim 1, wherein the imaging mirror is in a recessed position within the housing when the hinge member is in the first position.

30 4. The friction hinge assembly of Claim 1, wherein the imaging mirror is in a fully deployed position when the hinge member is in the third position.

5. The friction hinge assembly of Claim 1, wherein the hinge member comprises a mounting portion spaced apart from the support portion, the mounting portion coupled to the imaging mirror.

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6. The friction hinge assembly of Claim 5, further comprising an adjustment screw inserted through the mounting portion and the support portion to control the friction.

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7. The friction hinge assembly of Claim 6, wherein the adjustment screw is configured to increase the friction by reducing the space between the support portion and the mounting portion when tightened.

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8. The friction hinge assembly of Claim 6, wherein the adjustment screw is configured to decrease the friction by increasing the space between the support portion and the mounting portion when loosened.

9. A system for displaying an image at a display unit, comprising:

5 a mounting base coupled to a housing of the display unit, the mounting base comprising a longitudinal pin portion;

a hinge member coupled to the imaging mirror, the hinge member positioned substantially around the pin portion, the hinge member comprising a support portion;

10 wherein the pin portion is configured to apply a friction caused by contact of the pin portion with the support portion of the hinge member;

wherein the hinge member is configured to rotate about the pin portion from a first position to a second position without the friction;

15 wherein the hinge member is configured to rotate about the pin portion from the second position to a third position with the friction; and

20 a video source coupled to the display unit to transmit the image to the display unit for reflection by a fold mirror coupled to the housing toward the imaging mirror.

10. The system of Claim 9, wherein the pin portion comprises at least one corner configured to contact the 25 support portion of the hinge member to apply the friction.

11. The system of Claim 9:

30 wherein the hinge member comprises a mounting portion spaced apart from the support portion, the mounting portion coupled to the imaging mirror; and

further comprising an adjustment screw inserted through the mounting portion and the support portion to control the friction.

5 12. The system of Claim 9, wherein the video source comprises a camera unit of an auxiliary vision system of a vehicle.

10 13. The system of Claim 9, wherein the video source comprises a global positioning satellite system.

15 14. The system of Claim 9, wherein the display unit comprises a liquid crystal display operable to project the image onto the fold mirror for reflection toward the imaging mirror.

15. A method for rotating an imaging mirror of a display unit with a friction hinge assembly, comprising:

rotating a hinge member about a longitudinal pin portion of a mounting base from a first position to a 5 second position without friction caused by contact of the pin portion with a support portion of the hinge member, wherein the mounting base is coupled to a housing of the display unit, and wherein the hinge member is positioned substantially around the pin portion and is coupled to 10 the imaging mirror; and

rotating the hinge member about the pin portion from the second position to a third position with the friction.

15 16. The method of Claim 15, wherein the friction is caused by contact by at least one corner of the pin portion with the support portion of the hinge member.

20 17. The method of Claim 15, wherein the imaging mirror is in a recessed position within the housing when the hinge member is in the first position.

25 18. The method of Claim 15, wherein the imaging mirror is in a fully deployed position when the hinge member is in the third position.

30 19. The method of Claim 15, wherein the hinge member comprises a mounting portion spaced apart from the support portion, the mounting portion coupled to the imaging mirror.

20. The method of Claim 19, further comprising controlling the friction with an adjustment screw inserted through the mounting portion and the support portion.

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21. The method of Claim 20, further comprising tightening the adjustment screw to increase the friction by reducing the space between the support portion and the mounting portion.

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22. The method of Claim 20, further comprising loosening the adjustment screw to decrease the friction by increasing the space between the support portion and the mounting portion.

23. A method for displaying an image at a display unit, comprising:

receiving an image from a video source coupled to the display unit;

5 rotating a hinge member about a longitudinal pin portion of a mounting base from a first position to a second position without friction caused by contact of the pin portion with a support portion of the hinge member, wherein the mounting base is coupled to a housing of the
10 display unit, and wherein the hinge member is positioned substantially around the pin portion and is coupled to the imaging mirror;

15 rotating the hinge member about the pin portion from the second position to a third position with the friction;

projecting the image onto a fold mirror coupled to the housing; and

reflecting the image onto the imaging mirror.

20 24. The method of Claim 23, wherein receiving an image from a video source comprises receiving an image from a camera unit of an auxiliary vision system of a vehicle.

25 25. The method of Claim 23, wherein receiving an image from a video source comprises receiving an image from a global positioning satellite system.